Conclusions: At the moment the Partial Breast Irradiation is a procedure still under investigation as it is encumbered by high risk of local relapse as compared with external beam (OS is similar), as confirmed also by our study. Nevertheless it gained a great appeal among women and the IORT can be offered to accurately selected pts.

PO-0684

Morbidity after regional nodes radiotherapy in early breast cancer patients having axillary lymph node dissection

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Purpose/Objective: Axillary lymph node dissection (ALND) and adjuvant radiotherapy (RT) in breast cancer is associated with a risk of severe morbidity including lymphoedema, impaired function of the arm and chronic pain/sensory disability. The aim of this study was to evaluate the morbidity in two groups of heavily treated adjuvant breast cancer patients, differing only regarding inclusion or not of regional nodes in the RT volume.
Materials and Methods: 347 patients consecutively operated from 2007-2012 with breast conservative surgery (BCS) and ALND (>= 3 micro- or macrometastases in sentinel node (SN) or SN not identified). All patients received adjuvant taxane based chemotherapy and if indicated, trastuzumab and endocrine treatment. The RT consisted of whole breast irradiation (WBI) to patients with pN0 and pN1mi disease and loco-regional RT in case of >= pN1 disease. The dose was in all patients 50 Gy in 25 fx. Only patients without recurrence were eligible for the study. They were invited to participate in a cross-sectional study regarding evaluation of objective physical impairments, and filling out a questionnaire regarding morbidity.
Results: 277 patients participated. Of these, 185 patients (>=pN1), median 15 removed axillary nodes, received loco-regional RT, median follow up 3.3 years, while 92 patients (pN0, pN1mi), median 16 removed axillary nodes, received WBI, median follow up 4.3 years.
Circumferential ipsilateral arm difference of >= 2 cm of upper and/or lower arm was seen in 18% after loco-regional RT and in 16% after WBI (p=0.67). An increase of >= 10 % in ipsilateral upper and/or lower arm circumference was seen in 8% (loco-regional RT) vs 3% (WBI) (p=0.12) and if this was combined with weekly use of an arm sleeve these numbers were 19% (loco-regional RT) versus 15% (WBI) (p=0.39). Self reported lymphoedema of ipsilateral upper/lower arm was found in 44%/33% (loco-regional RT) and in 40%/29% after WBI (p=NS).
Severe impairments of shoulder function with abduction to 120° or less was 3% after both loco-regional RT and WBI and severe impairments of shoulder flexion to 120° or less were 1% and 2%, respectively. In the contralateral arm severe reduction of abduction/flexion was seen in 0.7%. No differences in self reported physical impairment, pain or sensory disturbances were seen between the two groups.
Conclusions: Clinical lymphoedema is seen in about 15-20% of patients after ALND and is not dependent on the type of RT (WBI or loco-regional RT). Severe impairment of shoulder function is rare and not influenced by including regional nodes in the RT volume. Awareness of morbidity is important to improve future treatment strategies in heavily treated breast cancer patients.

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Locally advanced breast cancer patients with >7 pN+ axillary lymph nodes treated without axillary irradiation

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Purpose/Objective: To investigate the impact in locoregional recurrence (LRR) of omission of axillary irradiation (axillary level I-II) in patients with ≥7 pathological positive axillary lymph nodes (>7pN+) and to identify prognosis factors associated in breast cancer patients.
Materials and Methods: A retrospective database was used to identify patients undergoing BCT (breast conserving treatment), adjuvant CT (chemotherapy) and radiation therapy (RT) from 2000 to 2011. Patients treated with neo-adjuvant chemotherapy (NCT) were excluded. This study analysed 100 patients (34 pN2 and 66 pN3). RT was delivered to the chest wall or wall breast and internal lymph nodes [internal mammary chain (IMC), supraclavicular, infraclavicular and axillary level III]. Disease free survival (DFS), metastasis free survival 5(MFS) and overall survival were analysed using the Kaplan-Meier method and compared using the log-rank test. Cox's proportional hazards regression models.
Results: With a median follow-up time of 63.2 months, 3 patients relapsed in not irradiated axillary region (1 isolated and 2 concomitant with distant metastasis). The median removed lymph nodes were 16 and the median lymph node ratio (LNR) was 0.8. The five years DFS, MFS and OS was 50%, 58% and 69.9% respectively. Univariate and multivariate analysis showed that triple-negative histologic subtype was associated with DFS (HR 3.34 [1.59 ; 7.05] ;p=0.02), MFS (HR 3.85 [1.59 ;9.29]; p=0.003) and OS (HR 5.77 [2.41 ;13.80]; p<0.001).
Conclusions: The omission of axillary irradiation (level I-II) in patient underwent to BCT with an appropriate axillary lymph node dissection showed a low rate of regional relapse. Triple-negative histological subtype in the most important prognosis factor in this population. Further prospective studies are necessary to assess the clinical impact of the omission of axillary irradiation.

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Larger tumor bed delineation volumes in irradiated breast cancer patients after oncoplastic surgery

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